



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,009	05/09/2006	Xiaobao Chen	DYC-00400	5750
28960	7590	05/05/2008		
HAVERSTOCK & OWENS LLP 162 N WOLFE ROAD SUNNYVALE, CA 94086			EXAMINER AFSHAR, KAMRAN	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 05/05/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,009

Applicant(s)

CHEN ET AL.

Examiner

KAMRAN AFSHAR

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-17 and 20-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-17 and 20-33 is/are rejected.
- 7) ☒ Claim(s) 34-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 03/09/2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: amended claim 15 recites word(s) "computer readable recording medium" which is not supported by the disclosure of the invention as originally filed.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

2. Applicant's arguments filed on 03/09/2008 have been fully considered but they are not persuasive.

Rejections under 35 U.S.C. § 101

In response to applicant's argument that: "Specifically, the Present Specification describes the claimed invention sufficiently for one skilled in the art to understand and apply the claimed invention. [Present Specification, page 10, line 5 through page 13, line 13 and the accompanying figures] Furthermore, a person skilled in the art would immediately recognize that the constituent components of the invention, such as a serving support node, gateway support node, radio network controller, and so on, are typically implemented on computer hardware, and therefore a skilled person of the art would be in no doubt from the description and the drawings that the invention is able to be manifested in the form of a computer readable medium on which a program to be executed by a computer has been recorded. Therefore, the rejection should be withdrawn (See Page 11-Page 12). It is noted that the features upon which Applicant relies (i.e. computer readable recording medium) is not

Art Unit: 2617

supported by the disclosure of the invention as originally filed. This is fully addressed in the rejections of the claim 15 as discussed below.

Objection to the Drawings:

In view of the amendment filed on 03/09/2008 (See Page 11), the objection to the drawing is withdrawn.

Allowable Subject Matter

3. In further review, the indicated allowability of claims 1-10, 13-15, 17, 20-35 are withdrawn in view of the newly discovered reference(s) to Krishnarajah (U.S. Pub. No.: 2003/0081592 A1), Lee (U.S. Pub. No.: 2003/0021256 A1). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In accordance with the claimed language of claim 15, the claimed invention is directed to description or expression of "A computer readable recording medium on which a computer program to be executed by a computer has been recorded", which is directed to computer processing related claim. There is no clear and precise reference for a computer readable recording medium on which a computer program to be executed by a computer has been recorded. Thus, the medium recited in claim 15 which is for communicating information via wireless communication can be interpreted as a signal or carrier wave when it communicates, which does not fall within one of the four statutory classes of 101.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Krishnarajah (U.S. Pub. No.: 2003/0081592 A1).

With respect to claims 13, Krishnarajah teaches a radio network controller (See Krishnarajah e.g. RNC of Fig. 8, Page 4, Lines 1-6 of ¶ [0051]) of a packet radio network for communicating internet packets between a serving support node and a mobile communications user equipment (See Krishnarajah e.g. internet packet network and UE 102, 100 of Fig. 7), payload data of each of the internet packets (See Krishnarajah e.g. payload data, or data frame, Page 3, Lines 2-9 of ¶ [0036]) comprising a plurality of different types of data (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶ Lines 1-2 of ¶ [0043]. Also see Type field, Page 4, ¶ [0046], adaptive multi-rate speech codec (or AMR), Fig. 12, Page 6, ¶ [0057] and Table 3), the radio network controller (See Krishnarajah e.g. RNC of Fig. 8) comprising a radio resource layer for controlling radio resources for communicating the internet packets (See Krishnarajah e.g. RRC, Page 5, Lines 1-4 of ¶ [0053]) a radio link control layer for controlling a medium access control layer to provide radio access bearers for communicating the internet packets via a radio access interface (See Krishnarajah e.g. The radio link control and media access control (MAC) map the radio bearers onto transport channels provided to the physical layer which sends the packets over the radio interface, Page 5, Lines 18-20 of ¶ [0053]) to the mobile communications user equipment (See Krishnarajah e.g. 102 of Fig. 7), the radio link control layer providing the radio resources controlled by the radio resource layer (See Krishnarajah e.g. The radio link control and media access control (MAC) map

Art Unit: 2617

the radio bearers onto transport channels provided to the physical layer which sends the packets over the radio interface, Page 5, Lines 18-20 of ¶ [0053]), wherein the radio resource layer (See Krishnarajah e.g. RRC, Page 5, Lines 1-4 of ¶ [0053]) is responsive to a radio access request data (See Krishnarajah e.g. the application requests via the IP that the API layer fragment the packets add an extension header to each packet. As instructed, the IP Layer accordingly fragments that single data block into several IP packets, each packet containing bits of a different class or treatment along with an appropriate header indicating the associated treatment/class, Page 3, ¶ [0043], also See Krishnarajah e.g. PDP context, Page 8, Line 7 of ¶ [0070]) using a radio access network (See Krishnarajah e.g. RAN 104 of Fig. 7) application protocol layer (See Krishnarajah e.g. application layer of Fig. 10, Page 5, Lines 7-13 of ¶ [0053]) to control the radio link control layer to establish using the medium access control layer (See Krishnarajah e.g. The radio link control and media access control (MAC) map the radio bearers onto transport channels provided to the physical layer which sends the packets over the radio interface, Page 5, Lines 18-20 of ¶ [0053]) a main radio access bearer for one of the different types of data in accordance with a main set of quality of service parameters, and to establish a radio access bearer for each of the different data types as a sub-flow (See Krishnarajah e.g. sub-flow, QoS class or treatment, etc., Page 5, 5-18 of ¶ [0054]) within the main radio access bearer in the medium access control layer (See Krishnarajah e.g. Fig. 13, Page 6, ¶ [0060]).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-0, 14-15, 17, 20-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnarajah (U.S. Pub. No.: 2003/0081592 A1) in view of Lee (U.S. Pub. No.: 2003/0021256 A1). With respect to claims 1, 6, 14, 15 a computer readable recording medium on which a computer program to be executed by a computer has been recorded (See Krishnarajah e.g. software, DSPs, Page 2, Lines 7-11 of

Art Unit: 2617

¶ [0033]) / or an apparatus / or a mobile user equipment for communicating internet packets (See Krishnarajah e.g. internet packet network and UE 102, 100 of Fig. 7) or / the packet radio network including a gateway support node, a serving support node and a radio network controller, controlling communication of the internet packets between the gateway support node (See Krishnarajah e.g. UTRAN, 120, RNC 124 of 8, SGSN-GGSN 110 of Fig. 7. Also See Lee 100, 102, 103a 112a-, 112b, 118a, 118b of Fig. 1), payload data (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶ Lines 1-2 of ¶ [0043], Also see Type field, Page 4, ¶ [0046], adaptive multi-rate speech codec (or AMR), Fig. 12, Page 6, ¶ [0057] and Table 3) of each of the internet packets data comprising a plurality of different types of data (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶ Lines 1-2 of ¶ [0043], Also see Type field, Page 4, ¶ [0046]), the mobile user equipment being operable (See Krishnarajah e.g. internet packet network and UE 102 of Fig. 7) to communicate context application request data See Krishnarajah e.g. of a packet radio network (See Krishnarajah e.g. UE initiates set of parameter, PDP context initiated, Page 8, Lines 1-9 of ¶ [0071],) to a serving support node (See Krishnarajah e.g. of a packet radio network (See Krishnarajah e.g. UE 102 , 110 of Fig. 7) , the context request data representing a request for a virtual communications channel (See Krishnarajah e.g. GTP tunnel for which the PDP context was initiated, Page 8, Lines 1-9 of ¶ [0071]) for communicating the internet data packets containing the different types of data, where the request data (See Krishnarajah e.g. the application requests via the IP that the API layer fragment the packets add an extension header to each packet. As instructed, the IP Layer accordingly fragments that single data block into several IP packets, each packet containing bits of a different class or treatment along with an appropriate header indicating the associated treatment/class, Page 3, ¶ [0043], also See Krishnarajah e.g. PDP context, Page 8, Line 7 of ¶ [0070]) includes a data field specifying (See Krishnarajah e.g. Page 6, Fig. 13), a main set of quality of service parameters and at least one other data field (See Krishnarajah e.g. Pages 5-6, Tables 1, 2) representing a request for at least one other radio access bearer providing a different quality of service parameters (See Krishnarajah e.g. QoS , classes , payload information, etc., Page 7, Lines 1-6 of 2 [0064]) , each of the radio access bearers being provided for one of the different types of data (See Krishnarajah e.g. RB#1 class A, RB#2 class B, RB#3 Class C, etc., Page 7, Table 4) in the payload of

Art Unit: 2617

the internet packets (See Krishnarajah e.g. PDP context identify on radio bearer corresponding treatment/class, Page 8, Lines 7-9 of ¶ [0069]). However, Krishnarajah does not explicitly teach context request data representing a request for a virtual communications channel for communicating the internet data packets. In an analogous field of endeavor, Lea teaches a context request data representing a request (See Lee, Activate PDP context request message, for a desired QoS is set by the MS or UE, Page 1, Lines 1-8 of ¶ [0013]) for a virtual communications channel for communicating the internet data packets (See Lee, Packet data service request, VCC (Virtual Channel Connection), Page 2, Lines 1-7 of ¶ [0029]). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Lee to Krishnarajah to provide a simplified establishment of a packet data transmission path for packet service wherein SGSN assigns to the GGSN a virtual Channel Connection for the data transmission from the GGSN to the SGSN as suggested (See Lee e.g. Page 2, ¶ [0028], Lines 5-6 of ¶ [0029], Also See Page 3, ¶ [0044]).

Regarding claims 2, 7, it is obvious that wherein the serving support node is operable (See Krishnarajah e.g. UTRAN, 120, RNS 124 of 8, SGSN-GGSN 110 of Fig. 7, Also See Lee 100, 102, 103a 112a-, 112b, 118a, 118b of Fig. 1), in response to the virtual communications channel (See Lee, Packet data service request, VCC (Virtual Channel Connection), Page 2, Lines 1-7 of ¶ [0029]) being established to communicate radio access request data (See Lee, Activate PDP context request message, for a desired QoS is set by the MS or UE, Page 1, Lines 1-8 of ¶ [0013]) in accordance with a radio access network application part protocol (See Krishnarajah e.g. application layer of Fig. 10, Page 5, Lines 7-13 of ¶ [0053]) to the radio network controller, and the radio network controller is operable (See Krishnarajah e.g. UTRAN, 120, RNC 124 of 8, SGSN-GGSN 110 of Fig. 7, Also See Lee 100, 102, 103a 112a-, 112b, 118a, 118b of Fig. 1) in combination with a radio resource control layer (See Krishnarajah e.g. RRC, Page 5, Lines 1-4 of ¶ [0053]) to establish using a medium access control layer one of the radio access bearers (See Krishnarajah e.g. The radio link control and media access control (MAC) map the radio bearers onto transport channels provided to the physical layer which sends the packets over the radio interface, Page 5, Lines 18-20 of ¶ [0053]) for each of the plurality of quality of service parameters specified for the different data type (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶

Art Unit: 2617

Lines 1-2 of ¶ [0043], Also see Type field, Page 4, ¶ [0046], adaptive multi-rate speech codec (or AMR), Fig. 12, Page 6, ¶ [0057] and Table 3).

Regarding claims 3, 8, the radio resource control layer (See Krishnarajah e.g. RRC, Page 5, Lines 1-4 of ¶ [0053]) is operable to establish the radio access bearers (See Krishnarajah e.g. Page 6, ¶ [0060]) as a main radio access bearer in accordance with the main quality of service parameters in the medium access control layer (See Krishnarajah e.g. The radio link control and media access control (MAC) map the radio bearers onto transport channels provided to the physical layer which sends the packets over the radio interface, Page 5, Lines 18-20 of ¶ [0053]), and to establish the radio access bearer for each of the different data types as (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶ Lines 1-2 of ¶ [0043], Also see Type field, Page 4, ¶ [0046], adaptive multi-rate speech codec (or AMR), Fig. 12, Page 6, ¶ [0057] and Table 3) a sub flow within the main radio access bearer in the medium access control layer (See Krishnarajah e.g. sub-flow, QoS class or treatment, etc., Page 5, 5-18 of ¶ [0054]) within the main radio access bearer in the medium access control layer (See Krishnarajah e.g. Fig. 13, Page 6, ¶ [0060]).

Regarding claims 4, 9, 20-21, 27-28, the payload data of the internet packets includes a data frame formed from an adaptive multi-rate speech codec, the data frame providing the plurality of the different types of data (See Krishnarajah e.g. different class of payload/data frame, Page 3, ¶ Lines 1-2 of ¶ [0043], Also see Type field, Page 4, ¶ [0046], adaptive multi-rate speech codec (or AMR), Fig. 12, Page 6, ¶ [0057] and Table 3).

Regarding claim 5, 10, 22-26, 29-33, the mobile user equipment (See Krishnarajah e.g. GTP tunnel for which the PDP context was initiated, Page 8, Lines 1-9 of ¶ [0071], also see PDP context identify on radio bearer corresponding treatment/class, Page 8, Lines 7-9 of ¶ [0069])) is operable to communicate the context application request data to the gateway support node in accordance with a Packet Data Protocol context activation (See Lee, Activate PDP context request message, for a desired QoS is set by the MS or UE, Page 1, Lines 1-8 of ¶ [0013]) procedure (See Lee Steps 301-319 of Fig. 3, Steps of 501-519 of Fig. 5).

Allowable Subject Matter

9. Claims 34-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 34, the prior art of record fails to disclose singly or in combination or render obvious that the serving support node comprises an internet protocol communications layer and a user data tunnelling layer operable to provide the virtual communications channel for communicating user data between the mobile user equipment and the gateway support node, wherein the serving support node is operable in combination with the gateway support node to respond to context application request data from the mobile user equipment to establish the virtual communications channel between the gateway support node and the mobile user equipment via the serving support node for communicating the internet packets, and in response to the context application request data including a data field representing main set of quality of service parameters and at least one other data field representing a request for a different set of quality of service parameters, each set of quality of service parameters being required for one of the different types of data in the internet packets, to establish a plurality of radio access bearers each in accordance with one of the sets of the quality of service parameters, each radio access bearer being provided for one of the different types of payload data of the internet packets.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a) Jappinen (U.S. Pub. NO.: 2003/0012133 A1).
 - b) Tamurra (U.S. Pub. No.: 2002/0077065 A1).
 - c) Sarkkinen (U.S. Pub. No.: 2001/0033582 A1).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

Art Unit: 2617

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Trost, William** can be reached @ (571) 272-7872. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamran Afshar 571-272-7796/

Examiner, Art Unit 2617